

# W5YI

National Volunteer Examiner Coordinator

## REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

Fred Maia, W5YI, Editor, P.O. Box 565101, Dallas, TX 75356-5101

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July 15, 1991

### HIGHLIGHTS OF THE FCC WARC REPORT

WARC-92 is not that far away. In about six months more than 150 nations will converge on Barcelona, Spain, for a month long review of several key parts of the radio spectrum. The deliberation of the International Telecommunication Union is scheduled to end on March 5.

For better or worse, their collective agreements are certain to impact Amateur Radio. When ratified by the Senate, the final acts of 1992 World Administrative Radio Conference will have the force of law.

Our hobby is totally governed by regulations that have their roots in the international arena. Ordinances and laws are enacted by Local and State governments, but they must be compatible with those of the federal government. In turn, the FCC's Rules must be consistent with WARC treaty agreements once ratified by the Senate.

In addition to regional frequency allocations, WARC policies provide all nations with broad guidelines for their Amateur Service. These directions include what constitutes acceptable Amateur activity and lists broad operator qualifications.

National administrations then interpret these instructions into their Amateur Service regulations. That's the system. It has worked since 1865 when twenty European nations met to agree on how

wireline telegrams would be delivered across international boundaries.

The 1992 WARC has an agenda that is more streamlined than the General WARC that took place in 1979. WARC-92 addresses the *Resolutions and Recommendations* of three previous ITU conferences, namely the WARC for the *Planning of the High Frequency Bands Allocated to the Broadcasting Service*, the WARC for the *Mobile Services* and the WARC on the *Use of the Geostationary Satellite Orbit and on the Planning of Space Services* utilizing it.

Spectrum for such new services as HDTV (high definition television) and satellite audio broadcasting will be determined. Additionally, the ITU recommended WARC-92 consider defining new space services in the frequency bands above 20 GHz. The delegates will thus be considering specific frequency bands, some of which impact important ham spectrum.

The FCC has been working on their WARC-92 recommendations for more than two years. To arrive at their conclusions, the Commission has been collecting information from various advisory committees made up of various industry and spectrum users. Along with those of the NTIA, the FCC position will guide the U.S. delegation from the State Department.

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On June 13th, the FCC officially adopted their position. It is important to realize that these are only recommendations of the FCC to the U.S. delegation. It certainly does not necessarily mean this will be the stance of the United States WARC delegation. It is, however, a very important piece of the puzzle.

## High frequency broadcasting

The FCC is recommending to the State Dept. that the U.S. support a reallocation of 1325 kHz from fixed and mobile HF services to the broadcast service due to severe congestion in existing HF broadcast bands.

This total represents additional allocations of 1125 kHz on a worldwide basis as well as 200 kHz at 7200-7400 kHz for ITU Region 2 to match the existing broadcast allocation in 7 MHz in other parts of the world, Regions 1 and 3.

International broadcasting consultant Stanley Leinwoll proposed an additional 455 kHz of shortwave spectrum be allocated to broadcasting over that proposed by the FCC in earlier stages of WARC preparation. Amazingly, Leinwoll proposed that 250 kHz of that amount be taken from the Amateur Radio Service in the 3.5 and 7 MHz bands.

ARRL called these proposals "...clearly unacceptable." It stated that the 7 MHz band is the most crowded of the amateur bands and that it, along with the 3.5 MHz band, are usually the only bands available for nighttime worldwide voice communications. The loss of any segment would result in the inability of amateurs to provide reliable international emergency and disaster communications.

The FCC concluded that the Leinwoll proposal would have a severe impact on the Amateur Service, and so it rejected the proposal.

The Commission is recommending that the worldwide 40 meter ham band be shifted down 100 kHz ...from 6900 kHz to 7200 kHz. Its 300 kHz bandwidth would remain the same. HF broadcasters would be moved upwards from 7200 kHz to eliminate the spectrum overlay and interference between the two services.

As a means of conserving spectrum, the FCC said HF broadcasters should use single-sideband emission - a feature certain to be opposed by many nations since it requires completely new HF broadcast station transmitters and receivers. The Commission said AM broadcasting should be phased out over a 15 year period.

## Low earth orbiting satellites

The FCC's asked for primary allocations for low earth orbiting (LEO) mobile satellite systems in the 137-138, 148-149.9 MHz and 400.15-401 MHz bands. They did not go through with their initial proposal to allocate 930 to 931 MHz for LEO up-link with a 420 to 421 MHz downlink, which removes the threat to the 70-cm ham band. The 420-430 MHz band is allocated to Amateur Radio on a secondary basis. Amateur TV is the main user of the 420-421 MHz segment.

## Above One Gigahertz

The Commission is recommending 1525-1530, 1530-1559, 1613.8-1626.5, 1626.5-1660.5, 1850-1990, 2110-2130, 2160-2180 and 2390-2430 MHz for mobile satellite use. Unaffected, however, are the secondary Amateur allocations at 2300-2310 and 2390-2450 MHz which would remain.

The FCC believes that amateur and amateur-satellite services are compatible with other existing services and can continue to meet their requirements without a change in allocation status. At one point the FCC considered reallocating the 2390-2450 MHz band to the Broadcasting Satellite Service (sound) and removing the secondary Amateur Service allocation.

Digital audio broadcasting (DAB) is recommended in both the 1429-1525 and 2300-2390 MHz bands. The FCC and NTIA will later agree on how to fine tune those allocations. DAB is a public direct audio broadcasting service uplinked to orbiting satellites.

The FCC also suggested a General Satellite Service KA-band allocation. The GSS would provide a wide variety of communications including broadcasting in the 19.7-20.2 and 29.5-30 GHz bands.

WOULD YOU LIKE TO BECOME A VOLUNTEER EXAMINER?

"I am a currently licensed  Advanced,  Extra Class amateur radio operator and wish to be a volunteer examiner. I have never had my station or operator license revoked or suspended."

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The FCC also suggested a General Satellite Service KA-band allocation. The GSS would provide a wide variety of communications including broadcasting in the 19.7-20.2 and 29.5-30 GHz bands.

The next step is for the United States to agree on a single viewpoint and submit it to the ITU in Geneva. The FCC's adopted position must be matched with that of the National Telecommunications and Information Administration. The NTIA manages all government spectrum while the FCC allocates non-government frequencies.

The positions of other nations worldwide will shortly be known once they make their submissions to Geneva. It will be interesting to see how they compare with those of the United States. Many countries, especially those of the so-called "third world," are not as receptive to Amateur Radio as is the U.S.

## OHIO HAM RADIO OPERATOR PLEADS GUILTY to sending false police distress calls

**James A. Haas, WT8Q**, of Athens, Ohio, has pleaded guilty in U.S. District Court in Alexandria, Virginia to felony charges that he transmitted false distress calls over a Virginia county police radio frequency after using an unauthorized credit card to purchase the radio equipment.

The Federal Communications Commission, Federal Bureau of Investigation and local Virginia police used electronic tracking equipment to locate the source of the calls. Haas had purchased the radio equipment in Vienna, Virginia, just the day before.

Federal officials were initially led to Haas when a phone call related to false-emergency transmissions over police radio frequencies throughout Kentucky and Ohio was traced to the Haas' home.

The FBI was trailing Haas on the evening of April 5th when the simulated officer-in-distress call was made. Haas was in the Washington, DC area to attend the Greater Baltimore Hambooree and Computer Fest.

Haas was arrested in his van in Sterling, Virginia,

while still transmitting with a hand-held. A cassette tape marked "siren" containing various emergency vehicle sounds was confiscated from his vehicle. FBI agents also found a list of local police and fire department frequencies.

Haas, 39, an Ohio high school teacher, ham club advisor and volunteer Amateur Radio operator examiner, was arrested at 10:35 p.m., an hour after first radioing the false distress call on a police radio frequency. He was later released on \$100,000 bond after spending the weekend in jail.

Considered a exemplary member of ham community, Haas is the past president of the Athens County Amateur Radio Association.

Under a negotiated plea bargain arrangement, Haas cannot be charged in any similar incidents that took place in Virginia's eastern district. The U.S. Attorney's office did say, however, that Haas made a similar call a year ago claiming he was an officer under fire during a highway chase.

At that time, fourteen state and local law enforcement agencies searched for an officer they thought was critically wounded in the line of duty after Haas allegedly transmitted messages over the police radio system. He ended the broadcast by saying, "I'm down." The transmissions sounded very authentic and may have been enhanced with sound effects.

Assistant U.S. attorney John P. Rowley III, said Haas is still under investigation for placing other false distress calls in Ohio and Kentucky. Haas also faces revocation of his Extra Class operator license.

Haas's attorney said his client has agreed to cooperate with law enforcement officials in the investigation of unrelated cases involving false distress signals. He faces a maximum of 15 years in prison and a \$500,000 fine on the two-count criminal conviction.

We tried to telephone Jim Haas/WT8Q this past weekend to get his side of the story, but his wife said he would not be back home until later. There was no answer when we called back.

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## NOVICE CLASS COMES TO GREAT BRITAIN!

Strange as it seems, while the United States is taking the code-free route to strengthen its Amateur Service, Great Britain has moved toward establishing a new Novice license with code. The United Kingdom has had a code-free "Class B" VHF-only ticket for decades! It apparently has not encouraged youngsters into the hobby as a prelude to possible careers in electronics and computer industries. The approaching "Novice Class A" is indeed very big news in the British Isles ...as big as the new Code-less Technician is here!

Thanks to *Tony Smith, G4FAJ/London*, we have copies of the new Novice Rules as published by the *Radio-communications Agency of the U.K. Department of Trade and Industry*. The new license is clearly aimed at the very young as part of *Project YEAR, "Youth into Electronics via Amateur Radio."* Some of the Novice instruction/testing features are interesting!

The syllabus to become a British Novice has a strong practical emphasis. Successful completion of a 30 hour course coordinated by the RSGB (*Radio Society of Great Britain*) qualifies applicants to take the Novice *Radio Amateurs Examination* which is held four times a year at local "City & Guilds" (municipal office?) examination centers. There is a charge to take the examination (how much is £8.95?) plus a "centre" (tax expense?) fee. The RSGB training course is available at no cost although the volunteer instructor may ask for assistance with incidental expenses.

Some of the subjects in the Novice course stress operation of an h.f. band receiver, tuning sideband, frequency indication, different signal modes, aerials (antennas), soldering, safety, electronic components (such as resistors, capacitors, etc) and their color codes, multimeter operation, block diagrams, and very elementary electronic theory. Students even get to construct a basic radio receiver.

Students work out simple circuit problems (such as Ohm's Law) on provided worksheets. Also included are such Amateur Radio practices such as QSLing, making a contact over the air, propagation, EMC (electro-magnetic compatibility - interference handling) and learning the Morse code.

The Morse code test includes both sending and receiving. Each character is sent at 12 wpm with a longer than normal gap between characters to reduce the overall reception speed to 5 wpm. A maximum of six incorrectly copied characters are permitted.

"Candidates will not be permitted to write down the Morse symbols (dots & dashes) for later translation."

The receiving exam consists of a minimum of 120 letters and 7 figures (about 25 words) transmitted during an approximate 6 minute run. The test includes certain stipulated abbreviations (54), Q-codes (20), procedural characters (5 - including preliminary call: CT; --.) and punctuation (strangely only 2 - question mark and slant bar.) Some of the official abbreviations include "88" for "love and kisses" and "OC" (Old Chap.)

The sending test consists of 75 characters sent at a speed of at least 5 wpm with a straight key. Four errors (which must be corrected with a series of 8 dots) are allowed.

The first Novice "Class A" written examinations took place on June 3rd with 199 registered examinees; the Novice Morse test on July 1. The first Novice licenses will be presented in a ceremony presided over by Mr. John Redwood MP, Parliamentary Under Secretary of State of the Dept. of Trade and Industry on July 25th.

## CODE REQUIREMENT FOR SHIPS AT SEA TO END?

PR Docket 90-480, seeks "...to Implement the GMDSS (*Global Maritime Distress and Safety System*) to Improve the Safety of Life at Sea." If adopted, this rule-making will signal the death of manual Morse code and radiotelegraphy operators on the high seas by the year 2000. (Comments closed: June 7, Replies: July 6, 1991) GMDSS completely automates communications by using satellite and digital technologies.

International requirements (Mobile WARC-1987) dictate that ocean-going vessels must have certificated Radio Electronics Officers on board. Our FCC has previously interpreted this to mean that radio officers must hold either the First or Second Class Radiotelegraphy Operator's certificate.

The FCC is now proposing to require a GMDSS "main-tainers" endorsement to the First or Second Radiotelegraphers license, the General Radiotelephone Operator's license or the Marine Operator Permit after an operator has demonstrated, through written examination given by the Commission, satisfactory knowledge of the GMDSS practices and procedures. This basically means that Radio Electronics Officers aboard large ocean-going ships no longer must be code proficient in order to be certified. The General Radiotelephone and Marine Operator Permit will be raised to the international certificate level.

The Radio Amateur's Licensing "INDEX" is very comprehensive and contains all (nearly 2,000) questions. Contains all (nearly 2,000) questions.

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## AMATEUR RADIO OPERATOR CENSUS - 6/1/91

State	Extra	Adv.	Gen.	Tech.	Nov.	Total:
AL	838	1519	1663	2228	1063	7311
AK	270	503	593	510	446	2322
AZ	1034	2234	2324	2837	1283	9712
AR	454	882	941	1211	609	4097
CA	6857	15242	15989	22871	15468	76427
CO	971	1872	2047	2189	1325	8404
CT	932	1510	1875	1610	1727	7654
DE	172	227	270	318	206	1193
DC	75	100	127	69	82	453
FL	3205	6935	8132	7662	6339	32273
GA	1132	2215	2387	3032	1502	10268
HI	274	500	569	644	662	2649
ID	238	498	665	649	409	2459
IL	2153	3989	4770	5198	3705	19815
IN	1181	2265	2622	3418	2199	11685
IA	604	1367	1486	1196	1063	5716
KS	566	1083	1498	1276	1049	5472
KY	594	1075	1334	1640	1191	5834
LA	679	1280	1382	1382	966	5689
ME	363	623	959	637	573	3155
MD	1242	2151	2119	2202	1540	9254
MA	1654	2650	3251	3281	2281	13117
MI	1750	3408	4098	4278	2817	16351
MN	931	1862	2233	1891	1403	8320
MS	359	724	813	873	540	3309
MO	1073	2070	2482	2282	1547	9454
MT	232	395	560	377	375	1939
NE	303	761	986	701	531	3282
NV	292	540	709	692	362	2595
NH	521	663	887	921	593	3585
NJ	1837	3103	3344	3625	2596	14505
NM	451	828	832	813	394	3318
NY	3103	5629	6603	7120	6903	29358
NC	1242	2511	2729	3142	1837	11461
ND	119	234	355	274	272	1254
OH	2455	4697	5310	7488	4415	24365
OK	681	1391	1385	1868	1154	6479
OR	914	1912	2440	2383	1655	9304
PA	2349	4164	3887	5002	3782	20184
RI	243	324	509	559	404	2039
SC	500	979	1231	1225	693	4628
SD	140	307	355	251	185	1238
TN	1037	2096	2069	3069	1545	9816
TX	3607	6792	7215	8546	4510	30670
UT	356	697	665	1480	829	4027
VT	185	294	389	333	241	1442
VA	1587	2750	2901	3028	2062	12328
WA	1760	3337	4101	4598	3215	17011
WV	392	635	849	1106	937	3919
WI	888	1689	2101	1850	1367	7895
WY	133	203	266	278	239	1119
PR	207	487	618	1969	3547	6828
VI	35	55	68	56	46	260
Other	42	55	60	71	195	423
Total	55212	106312	121053	138209	96879	517665

Other includes: Guam, American Samoa, N. Mariana Island, and other small islands.

(Source: FCC, Gettysburg, PA)

## MAY AMATEUR LICENSING STATISTICS

May	1988	1989	1990	1991
New				
Amateurs:	3002	3302	4284	4714
Upgrading:				
Novices	1885	2068	2249	1419
Technicians	573	661	791	642
Generals	492	481	595	414
Advanced	376	356	322	288
Total:	3326	3566	3957	2763
Renewals: (*)				
Total Renew:	4088	* 311	* 138	* 72
Novices	335	36	* 28	* 7
Purged:				
Total Dropped:	2021	* 1854	* 0	* 0
Novices	1055	902	* 0	* 0
Census:				
Indiv. Oper.	436912	456871	453928	517665
Change/Year	+8045	+19959*	-2943*	+63737*

## Individual Operators by Class: (and % of total)

Extra	Advan.	General	Technic.	Novice	Total:
<i>May 1988</i>					
45208	98493	113648	96888	82675	436912
10.3%	22.6%	26.0%	22.2%	18.9%	100.0%
<i>May 1989 (*)</i>					
48471	100572	115404	108158	84266	456871
10.6%	22.0%	25.3%	23.7%	18.4%	100.0%
<i>May 1990 (*)</i>					
48840	99047	113650	111325	81066	453928
10.8%	21.8%	25.0%	24.5%	17.9%	100.0%
<i>May 1991 (*)</i>					
55212	106312	121053	138209	96879	517665
10.7%	20.5%	23.4%	26.7%	18.7%	100.0%
Club/					
RACES &		(1988)	(1989)	(1990)	(1991)
Military:	2366	2474	2447	2432	
Total Active:	439278	459345	456375	520097	
% Increase	+1.9%	+4.6%*	-.6%*	+14.0%*	

(\*) NOTE: The number of amateurs in 1990 and 1991 is not comparable with prior years. Due to the implementation of the 10-year term license in 1984, amateurs who would ordinarily be dropping out of the Amateur Service between 1989 and 1993 by not renewing will be carried on the amateur roles for another five years before being purged from the FCC's data base. This has the effect of overstating the amateur census for 1989 through 1991 since the records of silent keys and non-renewals will not be deleted. The number of active amateur radio operator records now is in excess of half a million!

[Source: FCC Licensing Facility, Gettysburg, PA]

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## W5YI COMPUTER WATCH

- If Apple and IBM have their way, a completely *new family of PC's* that use yet to be developed Motorola "Power Chips" as their brain is on the horizon!

After first agreeing to disagree, Apple Computer, Inc. and IBM finally have decided to create powerful new open system software platforms for the 1990s, according to a letter of intent signed July 3rd.

The companies will develop and market new technologies which both Apple and IBM will integrate into existing and future products, as well as offer for use on other vendors' computers.

In order to implement this plan, Apple and IBM will form a new system software company to be jointly owned and independently managed. The software will be offered for sale for both IBM and Apple computers. Additionally, it will be marketed widely by the new company for use on other vendors' systems. IBM and Apple also plan to extend the ability of the Macintosh computer to operate in an IBM environment.

Motorola, Inc. and IBM will use their expertise to design and manufacture a new family of world-class POWER PC chips. Motorola will serve as a source to IBM, Apple and other open systems vendors. Motorola intends to market the POWER PC microprocessors in configurations that will target a broad spectrum of systems.

Implementation of the letter of intent is contingent on the execution of definitive contracts. Products resulting from these agreements are expected to reach the marketplace over the next two to three years.

What this means is that Intel, who have had basically all of the microcomputer chip business to themselves, will be getting some competition!

- Be on the lookout for a wave of new computer "appliance" outlets called super-stores that will sell the best selling PC's at rock-bottom prices. The *Computer Superstore Bandwagon* is indeed off and running.

The concept will help name brands - especially Apple, IBM and Compaq who are losing market share to the clones - to increase their sales and distribution. CompUSA, BizMart and Computer City already have big expansion plans.

Dallas-based Soft Warehouse recently changed its name to **CompUSA**. The new name is intended to better reflect the broad-based nature of its computer business. CompUSA is a chain of computer super stores that are soon to go public. You'll be seeing them sprout up all across the country.

CompUSA has already signed up Apple and IBM is next. Traditional computer re-sellers aren't happy that the big names are going the discount route. They say they won't be able to compete.

Not to be outdone, Tandy (Radio Shack) has announced that they too will open a chain of **Computer City SuperCenters** that will offer the four best selling personal computers: IBM, Apple, Compaq and Tandy ...as well as other name-brand computers.

In addition, the company will open **Computer City Super-Satellites** in each market that will carry a majority of the products sold in a SuperCenter.

Tandy will get the chain going by expanding the recently acquired Computer City SuperCenter operation from a branch of Inacomp Computer. Inacomp Computer is a large Detroit based chain with some 400 stores.

The SuperCenter concept signals a new direction for Tandy. Some 200 of its existing Computer

Centers will be converted to Radio Shack stores or outbound sales offices. Many will simply be closed.

**BizMart, Inc. Office Superstores** have been acquired by PC re-seller, Intelligent Electronics, Inc. for \$192 million. They too will be marketing Apple, IBM and Compaq PC's. The computer department, however, will be operated separately from the office supplies by specially trained franchisees.

Many 20,000 square foot BizMarts will soon expand to 33,000 foot **"Office Megacenters"** to make room for the new department. More than 40 BizMart's will open next year.

Even Sears is about to get into the brand-name sell-for-less business. They will open sixty **Sears Office Centers** in Sears stores by year end which will carry IBM, Compaq and Apple PC's.

- The big news in software is the **release of DOS 5.0 by Microsoft** that replaces its buggy 4.0. DOS 5.0 is loaded with many new features - including an easy-to-follow setup program that lets you save your old DOS in case something goes wrong. The list is \$99.95 but street price is much less.

There is a new full-screen ASCII text editor and you can unformat disks you didn't really mean to format in the first place. New "help" commands clearly explain all features. To conserve memory much of DOS 5.0 can be loaded into previously unused high memory. GW-BASIC has been replaced by a QuickBASIC interpreter. A new 668-page Users Guide and Reference Manual is included.

Microsoft's support department has been flooded with calls but so far, there have been no major compatibility problems. The big problem seems to be thousands of new users with questions all installing DOS 5.0 at the same time.

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license examination. Also complete instructions on how to administer No. 1000 tests. Licensees - Extra Class tests.

THE W5YI GROUP  
P.O. Box #565101,  
Dallas, TX 75356

SATISFACTION  
FAIR FEES  
OR MONEY BACK

wishing to upgrade...even volunteer examiners administering tests under the Notice and V.E./N.C. System... Contains all test questions, over 300 pages! Order from: W5YI today!

- In the market for a PC? You can get one from **MNG - Micro Marketing Group** in Dallas at an excellent price. This firm (which we have written about before, *W5YI Report* 7/15/90) is operated by two Extra Class amateurs, Jeff Poll, NA5S and Jim Westfall/NT5V.

We have purchased four PC's (one monochrome and three color) from them already and are thoroughly satisfied with their performance and service. Here are two configurations that you may want to consider:

(1.) **MNG 286-12 MHz Personal Computer** w/1 MB RAM (memory), 2 serial ports, 1 parallel port. Either a 1.2 MB high-density 5 1/4" or 1.44 MB 3 1/2" floppy disk Drive, 40 MB IDE fast hard disk drive, 14" Monochrome monitor and Enhanced 101 Keyboard. DOS: 3.3 or 5.0. Cost: \$849.00

(2.) **MNG 286-12 MHz VGA** - Same computer but with VGA (high resolution color) graphics. Cost: \$1079

Shipping Cost: \$25.00 via UPS. Warranty: One Year/Parts & Labor. (They can also add internal modems, tape drives, mouse, etc., if needed.) Telephone support is also available at no charge.

Order from: **Micro Marketing Group**, P.O. Box 551608, Dallas, Texas 75355 or Telephone: 214-349-4600 - Ask for Jeff or Jim. Or you can call us and we will handle for you.

- The controversy surrounding the **Notices of Violation issued to Amateur packeteers** allowing allegedly prohibited messages to pass through their station is not over yet!

One of the Amateurs cited, **Richard A. White, KA3T**, retained an attorney to get the Notice removed from his records. [*W5YI Report*, May 1 and June 1, 1991.]

The FCC now says the notifications were not formal *Notice of*

*Violations* in that they indicated: "...Mr. White *may* have operated his station in violation of the Amateur Service rules ...and that Mr. White *appears* that he used his station to facilitate the business activity of the *Coalition to Stop United States Intervention in the Middle East.*"

The FCC (in a letter written by J. J. Freeman, Engineer-in-Charge, of the Virginia Beach, VA field office on June 18th) says that since it appears Mr. White has taken corrective action to assure that his station is under his control "...no further purpose would be served by continuing to debate the Constitutional question as to whether the message concerning the Coalition's goals is protected free speech under the First Amendment."

"No further action will be taken in this matter... Further, in view of the corrective action taken, nothing in the record would be prejudicial to Mr. White in any future regulatory proceeding. The correspondence in this proceeding, therefore will not be expunged from the record."

White's attorney, **John J. McVeigh** (who is also KD4VS and an ex-FCC official) says the FCC response "...plays fast and loose with the law and the facts and is completely unacceptable. We intend to appeal..."

● According to the **JARL News** (published monthly by the Japan Amateur Radio League) there are **over one million Amateur Radio stations in Japan**. The MPT (Ministry of Posts and Telecommunications) reports there are over 6 million radio stations in Japan - 2.5 million each Land Mobile and personal wireless and 1,074,367 ham stations. These three groups represent 94.1% of all radio stations in Japan.

JARL also reports that 45 people were arrested for installing

modified ham radio equipment in their taxicabs. One of the frequencies used was a police radio frequency!

- The **Question Pool Committee**, an internal committee of the **National Conference of Volunteer Examiner Coordinators**, has issued a call for *public input to the contents of the syllabi* of Elements 2 (Novice) and 3A (Technician) class question pools.

Any amateur holding at least the next higher class license is solicited to provide comments concerning the subject(s) covered by the question pools. The pool must contain the 9 topics as set out in §97.503(c).

Although not required, a form is available for submission of the questions themselves. There is no form for submission of syllabus material. Letter form is quite acceptable and should be sent to all three members of the QPC, namely: **Ray Adams N4BAQ** (5833 Clinton Hwy #203, Knoxville, TN 37912); **Fred Maia W5YI** (P.O. Box 565101, Dallas, TX 75356) and **Bart Jahnke KB9NM**, (225 Main St., Newington, CT 06111)

Be sure to include not only your call sign but the class of your license, address and a phone number at which you may be reached. Also, please indicate what hours of the day is best for a phone call.

Input to these syllabi will be accepted until October 1, 1991, at which time the QPC will begin compiling the new syllabi, which will be placed in the public domain Feb. 1, 1992. Immediately upon release of the new syllabi, using them as a guideline, the QPC will solicit input of suggested questions themselves. This will result in their beginning work on the new Element 2 and 3A question pools July 1, 1992. New pools will be released in ASCII format Dec. 1,

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1992, with hard copy available Jan. 1, 1993. The publishers will be asked to have the new Novice/Technician study guides on the bookshelves May 1, 1993. The new pools will be the basis for all Novice/Tech tests administered on or after July 1, 1993.

It is expected that all future Question Pool changes will be effective July 1, however no additional changes will be scheduled before the Eighth Annual Conference of Volunteer Examiner Coordinators to be held on June 12, 1992.

- Need FCC Form 610's - *Application for Amateur Radio License?* They may be ordered by calling 203/632-FORM. They will be shipped from the FCC's forms distribution center in Hyattsville, MD.

You may also print your own provided:

- (1.) ...the Form 610's are the same page and image size, paper weight, paper color and ink color.
- (2.) ...you delete references to the Government Printing Office (GPO.)
- (3.) ...you do not add any other symbol, word or phrase that might be construed as personalizing the form or advertising on it.
- (4.) ...you do not add or delete from any part of the form.

- Do you remember the piece we did on *Steve Roberts, N4RVE; High-Tech Nomad*, [W5YI Report March 15, 1991] Well, there is a feature story on him with color photos in the July issue of *Discover* magazine on your newsstand now.

It tells about how 38-year-old Roberts changed from being a Columbus, Ohio, computer consultant to pedalling around the country on computer/ham radio/gadget laden bicycle. Last year he built the Behemoth (which stands for Big Electronic Human Energized Machine ...Only Too Heavy) bike which has a 105-speed transmission.

Behemoth gets its electric power from a panel of photovoltaic cells on the trailer he pulls.

His computing equipment, located under the front hood, can even send and receive FAXes. He has an on-board cellular phone to compliment his ham radio.

A satellite terminal allows Steve to enter the Internet global computing network. Behemoth can understand about a hundred words and Steve simply asks his bike to do things, like "Read mail." The computer then converts the text into speech. He finds his way by a satellite navigation system.

When necessary, Behemoth's security system actually dials 911 by itself and says, "Hello police, I am a bicycle and I am being stolen. My current latitude is...."

Steve will be taking to the road again shortly. I get electronic mail from him periodically and will try to follow his hi-tech exploits.

- While on the subject of Internet, the July 8th issue of *Forbes Magazine* has an article on the semi-public computer network. *Internet has 3 million users in 33 countries!*

Internet, a loose affiliation of private, academic and government supported networks, is without an owner to police its lines and keep it running smoothly. America needs a computer network. The concept of a universal computer network could cut the cost of phone, FAX and postal service dramatically.

Internet, a high-speed cross-country data link managed by the National Science Foundation, runs off of \$20 million a year in federal subsidies. Commercial traffic is banned. Once you get on the system, Internet charges you nothing for the time you use.

- The May 1991 *Proceedings of The Radio Club of America* reveals that three ARRL Directors, *Hugh A. Turnbull, W3ABC, Stephen A.*

*Mendelsohn, WA3DHF and Frank M. Butler, Jr. W4RH* have been elevated to the Grade of Fellow in the organization. The Radio Club of America was founded in 1909 and is the nation's oldest and most prestigious radio group. Membership is by invitation only.

- The petition filed by the ARRL requesting an *Amateur allocation at 216-220 MHz* has been assigned file number: RM-7747. A thirty day comment period has been assigned when closes July 24, 1991. [See last issue for details.]

- *R. C. Smith, W6RZA*, who heads up the Greater Los Angeles Amateur Radio Group-VEC tells us that one of their examinees, *Roger M. Mahoney, W6QYI*, has just been named Cardinal of the Los Angeles Catholic Diocese.

- Talent Connections, Inc., a firm headed up by Ex-NBC news correspondent and producer *Ray Neal, K6DUE*, plans to produce a series of video tapes entitled *"Hams in Space."*

Proposed are five, 5-6 minute chapters which may be played in sequence or individually. The chapters are tentatively called:

- (1.) *How Hams Invaded Space;*
- (2.) *Living in Space;*
- (3.) *Ham Stations in Orbit and Earth;*
- (4.) *Space and Schools Go Well Together and;*
- (5.) *Ham Radio's Future in Space.*

K6DUE chairs the ARRL/AMSAT/SAREX (Shuttle Amateur Radio Experiment.)

While they have generous contributions from some members of the Amateur industry, they still need an additional \$25,000 to expand and polish the production. (Donations to: 1313 Robin Hood Road, High Point, NC 27262)

THE HAM RADIO HANDBOOK - NOW!! Obtain your Amateur Radio License PREPARATION SOFTWARE - Take sample ham radio Element 2 and 3(A) test questions, multiple choices, correct answer

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- The FCC has sent out a revised list of countries who have made arrangements with the United States to grant reciprocal Amateur operating privileges. Added to the list are the South Georgia Islands ...also Gough Island and Tristan Da Cuhna Island.

This newsletter is being written one week early since I will be on vacation next week in Bermuda. (My wife, Doris and I are taking a cruise out of New York City.) Getting a Bermuda reciprocal Amateur operating license turned out to be incredibly easy! I merely telephoned the Government of Bermuda, Dept. of Telecommunications (809/292-4595).

A lady told me to FAX her a copy of my U.S. ham ticket. A couple of hours later she FAXed me back Bermuda Amateur Class Three Operating Permit No. 672, Call sign to be used: W5YI/VP9 - valid until Oct. 31, 1991. I was also FAXed a schedule of frequencies, authorized emissions and transmitter power. (150 watts below 144 MHz, 50 watts above.)

- Doling out 220 MHz Spectrum** - The FCC is unhappy with the way it will determine who gets business licenses in the 220-222 MHz re-allocated band. Some 59,000 applicants have flooded the Commission with applications for 200 new narrow-band channels.

A lottery will decide who gets a channel, many (maybe most) will simply sell their license at a big profit. This is what happened when the FCC approved cellular licenses some time ago. Had they been sold, they could have brought in as much as \$50 billion to the U.S. treasury!

The FCC still has another three megahertz to allocate, but they could have another 200 MHz if legislation transferring government spectrum to the private sector gets approved.

The Bush administration wants to sell the frequencies to the highest bidder. At least this way the U.S. taxpayer - and not individual entrepreneurs who paid nothing for the license will benefit.

Historically legislators have been opposed to auctions since the system favors deep-pocketed investors and corporations.

To make their point, the Bush administration has put together a three-minute video poking fun at the "Lotto America" spectrum lottery system.

- Phone service coming to shared ham bands.** The FCC has approved a test of *Wireless Personal Communications Services (PCS)* in Denver, Atlanta and Raleigh-Durham, N.C. The experiment will test the feasibility of offering new services such as CT-2; second generation cordless telephones. Spectrum used will be in the 900-941 and 2400-2483 MHz bands, portions of which are shared with the Amateur Service. Wireless cable is the hot communications buzz word these days.

- "Short future for Shortwave"** is the title of an article in a June 1991 issue of *Broadcasting* magazine. They say HF shortwave broadcasting may be on the brink of extinction in the wake of new digital satellite technologies.

Establishment of satellite services will depend greatly on what happens at the 1992 WARC in Spain when world allocation of L band frequencies is expected to be a major issue. U.S. start-up companies are already planning FM-quality digital audio and other services delivered via satellite.

- The FBI seized 35,000 pirate TV converters** from a multi-million dollar outfit in a three city raid made in Las Vegas, Reno and San Francisco last month.

The boxes were taken from three warehouses used by a West Coast company that operated under several names. The converters had been modified to descramble premium and pay-per-view programming. The FBI believes the converters were imported and later modified in this country.

- High Tech Heil** is the name of a Monday night telecast produced in *Bob Heil's (K9EID) personal studio, Lab One*. The telecast is satellite broadcast on Spacenet 1, Transponder 15 at 2100 Central time.

**QSO Amateur Radio** comes on just before and after the Monday night telecast. This is a live call-in radio show. Bob says the number one question is "How can I become a ham and where do I go?" Bob wants to hear from you if you or your club have decent quality VHS, Super VHS or Hi Pro 8 video tapes of your interesting projects. (618/295-3000)

- Young Michael Dell started Dell Computer in 1984 at the age of 19 in Austin, Texas. He sells 85% of his computers direct to the customer. **Dell Computer had a 41% sales gain last year** ...to \$546 million. Earnings: \$27 million. Mike Dell also holds \$173 million in company stock. Not bad for a seasoned veteran now aged 26!

- Prices of CD-ROM Drives are dropping.** The average price has been in the \$700 class, but Tandy now has a new \$399.95 CD-ROM Drive. They can store unbelievable amounts of data (to 1000 MB), but access time is slow; about 400 to 800 milliseconds.

- Cuba has a new Third Class Amateur license** requiring 5 wpm. Licensees get a "CL" prefix and 160/80 meter CW privileges. New Zealand hams have a new band at 165-190 kHz with a 5 watt limit.

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## ALLOCATION OF SPECTRUM TO THE AMATEUR RADIO SERVICE 0 TO 30,000 MHz

The Amateur Service is sometimes described as having generous spectrum allocations. For example, on the 220-222 MHz re-allocation, the FCC said repeatedly that we have substantial amounts of other spectrum in which to conduct our operations. The following chart is used by the ARRL to show as simply as possible that of the total spectrum below 30 GHz; the Amateur Service has less than 5% allocated to it and 4.5% of that is shared with other services and subject to their interference. Only *two/tenths of one percent* of the total amount of spectrum from 0 to 30 GHz is exclusive to the Amateur Service.

Seg- ment <u>MHz</u>	Amateur <u>Exclu- sive</u>	Ama- teur <u>Shared</u>	Total <u>Ama- teur</u>	Sub- ject <u>to ISM</u>	Total <u>MHz in Segment</u>
0.0-3.0	0.1	0.1	0.2	0.0	3.0
3.0-30	3.5	0.05	3.55	0.0	27.0
30-300	11.0	0.0	11.0	0.0	270.0
300-3 GHz	0.0	186.0	186.0	76.0	2700.0
3-30 GHz	*50.0	1175.0	1225.0	400.0	27000.0
TOTALS:	64.6	**1361.15	1425.75	476.0	30000.0
% TOTAL:	0.2%	4.5%	4.7%	1.6%	

ISM:=Industrial, Scientific & Medical Equipment. ISM is allocated in several areas of the spectrum in which to radiate energy in course of performance of function; Microwave ovens are, for instance, ISM devices. One third of all amateur frequencies below 30,000 MHz are subject to ISM interference.

\*=The band segment 24 GHz to 24.05 GHz is counted as exclusive in that no other radio service operates there. However, it is subject to interference from ISM devices operating on 2.4125 GHz.

\*\*=The Amateur Service shares with the government on these bands. Amateurs must not cause interference to government stations, nor are they protected from interference caused by government operations. In addition, 831.15 MHz (61%) of these shared frequencies are also available to other private sector services. The utility of the 902-928 MHz band to Amateurs, for instance, is greatly reduced by the sharing arrangement. The ISM devices are permitted in the entire band; all other services must accept interference from ISM. Military radiolocation stations and then other government radiolocation stations are next in priority, followed by government fixed and mobile stations. Then come Automatic Vehicle Monitoring (AVM) stations and finally, at the lowest priority, Amateur stations.

## PETITION FOR AMATEUR SERVICE RESTRUCTURING

**William C. Wells, WA8HSU**, of Logansport, Indiana, has submitted a rather interesting *Petition for Rulemaking* requesting that the FCC restructure the Amateur Service to provide for only two license classes. The well done petition (which runs to eight single-spaced type-written pages) probably has little chance of acceptance since the FCC recently made a major alignment by adopting code-free entry in Amateur Radio.

Basically Wells wants to reduce the number of license classes from five to two: **Restricted (or Code-free)** Amateur Radio license and Amateur Radio license. The Restricted Amateur licensee would have all privileges above 30 MHz and the Amateur Radio licensee; same as today's Amateur Extra Class. There would be only four test elements instead of the present eight:

**Element 1:** 5 wpm telegraphy, ("The 5 wpm Morse code meets the letter and spirit of the current ITU regulations.")

**Element 2:** Rules and Regulations, Amateur practices and procedures, (35 questions/pass:26)

**Element 3:** Safety (25 questions/pass 18) and;

**Element 4:** Technical topics (50 questions/pass 37)

A licensee would have to pass Elements 2, 3 and 4 to obtain a Restricted Amateur license; Elements 1, 2, 3 and 4 would yield a full Amateur ticket. Presently licensed Amateurs who have passed a Morse code test (including Novice operators) would be grandfathered to the full Amateur Class. Code-less Technicians would convert to the new Restricted Amateur Class. Passing Element 1 (5 wpm code) qualifies a Restricted Amateur licensee to be a full Amateur. Applicants who hold a First or Second Class commercial radiotelegraph license would receive credit for Elements 1 and 4; General Radiotelephone license: Element 4.

Wells, who holds both Amateur Extra and First Class (now General) Radiotelephone licenses, points that he has nothing to gain if the FCC adopts his suggestion. He "...in fact, loses the exclusivity of the Amateur Extra Class subbands." He also believes his proposal "...remedies the injustice done to the General Class licensees of 1967 who had privileges which they had earned taken away as a result of the ARRL sponsored incentive licensing program."

Wells adds that "The ARRL be disqualified from any comment on this petition due to their vested interest in the present system. Not only are they responsible for the creation of the current system, but they derive far more income from book sales than they do from members' dues. This system would therefore reduce their income from the sales of license manuals. This is an unacceptable conflict of interest."